## 

OM nucleic - nucleic search, using sw model

Run on: September 1, 2000, 01:01:08; Search time 261.02 Seconds (without alignments) 4319.238 Million cell updates/sec

Title:

Perfect score: 

Scoring table:

IDENTITY\_NUC
Gapop 10.0 , Gapext 1.0

Total number of hits satisfying chosen parameters:

243080 seqs, 68777915 residues

ium DB seq length: 0 iium DB seq length: 1000000

Post-processing: Minimum Match 0%

Maximum Match 100% Listing first 45 summaries

Database : Issued\_Patents\_NA:\*
1: /cgn2\_6/ptodata/2/
2: /cgn2\_6/ptodata/2/
3: /cgn2\_6/ptodata/// /ggn2\_6/ptodata/2/ina/5A\_COMB.seq:\*
/cgn2\_6/ptodata/2/ina/5B\_COMB.seq:\*
/cgn2\_6/ptodata/2/ina/5C\_COMB.seq:\*
/cgn2\_6/ptodata/2/ina/5C\_COMB.seq:\*
/cgn2\_6/ptodata/2/ina/6\_COMB.seq:\*
/cgn2\_6/ptodata/2/ina/PCTUS\_COMB.seq:\*
/cgn2\_6/ptodata/2/ina/PCTUS\_COMB.seq:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

22222	c 220 10 20 20 20 20 20 20 20 20 20 20 20 20 20	0000	Result
298.2 290.2 274.8 274.8 274.8	842.2 842.2 842.2 303.4 301.4 301.4 298.4	2240.2 1739.4 1739.4 1739.4 1739.6 1678.6 1588.4 1588.4 1588.4	Score
	10.3 9.9 9.9 3.7 3.7 3.6 3.7	27.3 21.2 21.2 21.2 21.1 19.4 19.4	Query
1911 1914 789 789 789	3674 3674 6363 10970 1965 2499 2499 2499 2499 2499 2499	8535 8323 8323 8323 8323 8202 8332 10367 10367 10367	Length
1112	000000000000000000000000000000000000000	10 H A B B B B B B B B B B B B B B B B B B	BB
US-08-258-420-7 US-08-181-335B-3 US-08-181-335B-5 US-08-181-335B-5 US-08-181-335B-6	US-08-709-209-324 US-08-48-101-324 US-08-929-967-6 US-08-716-351A-5 US-08-716-351A-5 US-08-708-420-9 US-08-108-420-910 US-08-709-209-310 US-08-458-101-310 US-08-458-101-31 PCT-US91-08254-1 PCT-US91-08254-2	US-08-716-351A-1 US-08-110-300A-8 US-08-816-642-8 PCT-US93-08041-8 US-08-258-420-13 US-08-850-961-1 US-08-810-300A-9 PCT-US93-08041-9 PCT-US93-08041-9 US-08-105-483-324	ID
Sequence 7, Appli Sequence 3, Appli Sequence 5, Appli Sequence 5, Appli Sequence 6, Appli	324, 324, 6, AE 5, AE 9, AF 310, 310, 310, 113, I	Sequence 1, Appli Sequence 8, Appli Sequence 8, Appli Sequence 1, Appli Sequence 1, Appli Sequence 9, Appli Sequence 9, Appli Sequence 9, Appli Sequence 9, Appli Sequence 324, App	Description

Query Match Best Local Similarity Matches 4358; Conserv

Conservative

27.3%;

Score 2240.2; DB 5;
Pred. No. 0;
2; Mismatches 2820;

Indels

207; Gaps

Length 8535;

320 agcagacgtgctaggaggatcacaggctgccaccctgggggacgccccggggaggtgggga 379

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28		27
144.4	149.6	149.6	149.6	149.6	149.6	149.8	157.2	162.6	165.6	176.4	192	192	221.8	226.2	232.6	274.8	274.8		774 B
1.8	1 8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.0	2.2	2.3	2.3	2.7	2.8	2.8	3.4	3.4		ىد 4
9661	1158	1158	1158	1158	1158	1167	10306	8387	2448	2391	5176	5109	1237	1234	735	789	/89	1	789
υ	տ	4	ω	w	N	S	G	w	G	u	-	. ,_	K	N	N			١.	o
US-08-716-351A-3	US-08-691-563C-1	US-08-4/0-006A-1	US-08-384-13/-1	US-08-471-969-1	US-08-471-724-1	US-08-691-563C-61	US-08-716-351A-4	US-08-532-814-1	US-08-691-563C-53	US-08-691-563C-57	US-08-0/3-836-2	US-08-0/3-636-1	0S-08-/98-000-2	US-08-798-000-1	US-08-798-000-3	PCT-0895-00129-6	FCT-0893-00123-3	TOT - 100 - 100 - 5	PCT-US95-00129-3
Sequence 3, Appli	Sequence I, Appli	۲.	٠,	٠,	٠,	, 6			ر د	n .	4 n	ر ا	٠,	Sequence 1, Appli	ر ـ	ه د	n (	Segmence 5 Appli	Sequence 3, Appli

## ALIGNMENTS

```
; NAME/KEY: misc_feature
; LOCATION: 1..8535
; OTHER INFORMATION: /standard_name= "Galv SEATO Genome"
US-08-716-351A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 1
US-08-716-351A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/08716351A Patent No. 6033905 GENERAL INFORMATION:
                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: 15
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 543-5600
TELEFAX: (415) 543-5043
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US94/03784
FILING DATE: 06-APR-1994
ATTORNEY/AGENT INFORMATION:
NAME: Bastian, Kevin L.
REGISTRATION NUMBER: 34,774
REGISTRATION NUMBER: 34,774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 8535 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Gibbon Ape Leukemia Virus-Based TITLE OF INVENTION: Retroviral Vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                      MOLECULE TYPE:
                                                                                                               HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/716,351A
                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                              STRANDEDNESS:
                                                                                                                                                          linear
                                                                                                                    Ö
                                                                                                                                      DNA (genomic)
                                                                                                                                                                                single
                                                                                                                                                                                                                                                                                                                                                             15280-128-1PC
```

g 8	1454 1882	gattgacatgggatttcccttgactcgccccggttgggactacaacacggctgaaggtag .	1941
Qy	1514	gagagettgaaaatetategeeaggetetggtggegggteteegggggegeeteaagaeg 1	573
Вb	1942	63 -	001
Qy	1574	gcccactaatttggctaaggtaagaggtgatgcagggaccgaacgaa	633
ф	2002	N -	061
Qy	1634	atttettgagaggeteatggaageetteaggeggtteaccecttttgatcetaccteaga l	693
DЬ	2062	6.1	121
Оу	1694	ggcccagaaagcctcagtggccttggccttcattgggcagtcggctctggatatcaggaa l	7
ф	2122	GGACAACAGGCTGCGGTCGCCATGGCCTTTATCGGACAGTCAGCCCCAGATATCAAGAA	-
VΩ	1754		.813
Ф	2182	AAAGTTACAGAGGGCTAGAGGGGCTCCAGGACTATTCCTTACAAGATTTAGTAAAAGAGGC	241
Qy	1814		1873
Дb	2242	AGAAAAGGTGTACCATAAGAGAGAGAAGAAGAAGAAAAAAAGAAAG	2301
Qy	1874	agagaagaaagggggaaagacgtgatagacggcaagagaagaatttgactaagatctt	1933
DЬ	2302	GCAGAAGAAAAGGAGAGGCGGCGATAGGCCGAAGAAAAAACTTGACTAAAATTCT 2	361
Qy	1934	ggccgcagtggttgaagggaagagcagcagggagagagagagagagattttaggaaaatt l	1991
Вb	2362	GGCCGCAGTAGTAAGTAGAGAAAGGGTCCACAGGTAGGCAGCCAGGCAACCA 2	2421
Qy		992 aggtcaggccctagacagtcagggaacctgggcaataggaccccactcgacaaggaccag 20	2051
ф	2422	GGCAAAGAAGACACCTAGGGATGGAAGACCTCCACTAGACAAAGACCAG	2470
Qy		tytycytattytaaayaaaayyacactyyycaayyaactyccccaayaayyyaaacaaa 2	2111
Вb	2471	TGCGCATACTGTAAAGAGAAGGGCCATTGGGCAAGAGAATGTCCCCGAAAAAAACACG	9528
Qy	2112	- 4	2171
Дb	2529	TCAGAGAAGCCAAGGTTCTAGCCCTAGATAA CTAGGGGAGTCAGGGTTCGGACCCCCT 2	586
Qy	2172	ccccgagcccagggtaactttgaaggtggaggggcaaccagttgagttcctggttgatac 2	231
ДЪ	2587	CCCCGAACCTAGGGTAACACTGTGGGAGGGGACCCCCATTGAGTTCCTGGTCGACAC	646
Qy	2232	cygagcggagcattcagtgctacaaccattaggaaaactaaaagaaaaaaaa	Ψ
B	2647	CGGAGCTGAACATTCAGTATTGACCCCAACCCATGGGAAAAAGTAGGGTCCAGACGGACG	706
Qy	2292	292 ggtgatgggtgccacagggcaacggcagtatccatggactacccgaagaaccgttgactt 23	- 51
Ф	2707	CGTGGAAGGAGCACAGGCAAGGTCTACCCCTGGACCACAAAAAGACTTTTAAAAAT 2	2766
Qy	2352	gggagtgggacgggtaacccactcgtttctggtcatccctgagtgcccagtaccccttct 2	2411
Db	2767	<b>6.</b> 1	2826
Qy	2412	aggtagagacttactgaccaagatgggagctcaaatttcttttgaacaaggaagaccaga 2	47
Db	2827	GCAGGGACCTCCTAACCAAACTAAAGGCCCAGATCCAGTTTTCCGCTGAGGGCCCACA	9886
Qy	2472	agtgtctgtgaataacaaacccatcactgtgttgaccctccaattagatgatgaatatcg 2	2531
В	8	GTAACATGGGGAGAACGCCCTACTATGTGCCTGGTCCTAAACCTGGAAGAAGAATACCG	946

1453 1881	gttagaggctagaaaaatgttcctggggccgacggggcgacccacgcagttgcaaaatga 	1394 1822
1393 1821	ggatgattgtcaacagctgctgcagacactcttcacaaccgaggagcgagagaga	1334 1762
1333 1761	ggatccccaacgcctcacggggttggtggagtcccttatgttctctccaccagcctacttg	1274 1702
1273 1701	ttggccctttcttctgcagatctctataattggaaaactaaccatccccctttctcgga 	1214 1642
1213 1641	attaccyctycycacctatygccctcccatyccaygygyccaattycayccctccayta	1154 1582
1153 1581	tgccgggactcggagccggagaggcgccaccccggagcggacagacgagatcgcgat	1522
1096 1521	acagggtgctgtgaggggacctctgccc-tcctggagctccggtggtggagggacctgc	1038 1462
1037 1461	tegaggageegeegacttggeeggaaceccaaectgtteeeceaeceecttatecage	980 1402
979 1401	agagaaaacaacactcggccgaaaaagtcgagccctcttcctcgtatctaccccgaga	920 1342
919 1341	atgggttaaaccatggctaaataaaccaagaaagccaggtccccgaatcctggctcttgg 	860 1282
859 1281	teateetgateaggageectatateettaegtggeaagatttggeagaagateeteegee	800 1222
799 1221	ctttaattotgaaattatoctggotgttaaggoaatcatttttoagaotggaoooggoto	740 1165
739 1164	gcagactttctgtgcctctgaatggccaacattcgatgttggatggccatcagaggggac	1105
679 1104	ttggactgaagttagatccagggotcataatttgtcagttcaggttaagaagggaccttg	620 1045
619 1044	tgtctacagttttaatatgggacagacagtgactacccccttagtttgactctcgacca	560 985
559 984	gggtcgcgtgtgtctggatctgtttggtttctgtctcgtgtgtctttgtcttgtgcgtcct	500 925
499 924	gegaaagetteececteegeggeegteegaetettttgeetgettgtggaagaegeggae -	<b>44</b> 0 865
439 864	gagccagggacgcctggtggtctcctactgtcggtcagaggaccgagttctgttgttgaa	380 816
815	AACAGACGTGTTCGGGGGCTCACCGCCTGGTAATCCAGGGAGACGTCCCAGGATCAGGGGA	756

Ĝ

õ

oy og Db

04 pp

3424 3244 3184 3064 3612 ggatgagcgtaagggagtagcccgaggagttttaacccaaaccctaggaccatggaggag 3724 GTACCTACTCAAGGAAGGAAAAAGATGGCTAACCCCAGCCCGAAAGGCTACTGTTATGAA 2947 ACTACATGAAAAGCCAGTACCCTCCTCTATCGA----CCCATCCTGGCTCCAGCTTTTCCC 2532 actatattctccccaagtaaagcctgatcaagatatacagtcctggttggagcagtttcc ccaagcctgggcagaaaccgcagggatgggtttggcaaagcaagttcccccacacaggttat 2651 CTTGCTGTCAGCCCCTGCATTGGCCCTCCCAGACCTCACCAAGCCATTCACTCTATATAT aggctacagagcctctgctaagaaggcccagatttgcaggagagaggtaacatacttggg agccaccaaacaggactgcttagaaggtacgaaggcactactgctggaattgtctgacct 3251 toaactgaaggccagtgctacaccagtatcagtcagacagtaccccttgagtagagaggc CACTGTATGGGCAGAAAGAGCCGGCATGGGACTAGCCAATCAAGTCCCACCAGTGGTAGT cctgctgagcgcacctgctctggccctccctgacgtaactaaaccctttaccctttatgt 3611 cttaaaagatgccttcttctgcctgagattacaccccactagccaaccactttttgcctt 3011 aaaagggggattctcctgggctcctgagcaccagaaggcatttgatgctatcaaaaaaggc CGAGTGGAAAGACCCAGAAAAAGGTAACACAGGTCAGCTGACCTGGACGCGGCTACCACA CAGGCTCTGGATCCCTGGGTTTGCTTCCCTGGCTGCACCCTTGTACCCCCTAACAAAAGA cagactgtggatcccggggtttgcgaccttagcagccccactctacccgctaaccaaaga AATCCCTGTTCCTACGACCCCCAGACAGGTCCGTGAATTTCTAGGCACTGCCGGATTCTG gataccggccccaaccacagccaaaccaagtgagagagtttttggggacagctggattttg gtacagtttgcggggcgggcagcgatggctgacggaggcacggaagaaactgtagtcca GGGGTACCGGGTATCGGCTAAGAAGGCCCCAGCTCTGCCAGAGAGAAGTCACCTATCTGGG TAGGGCCCTCAACCCCCAGGTGGTGTTACTCCAATATGTGGACGACCTCTTGGTGGCCGC caggatccaacaccctcaggtgaccctcctccagtacgtggatgacctgcttctggcggg AGGGTTCAAGAACTCTCCCACTCTTCGACGAGGCCCTCCACCGAGATTTGGCTCCCTT agggttcaagaactccccgaccatctttgacgaagccctacacagggacctggccaactt 3131 cgaatggagagatccaggtacgggaagaaccgggcagctcacctggacccgactgcccca 3071 **AAACCCTTACAATCTTCTGAGTTCCCTTCCGCCTAGCTATACTTGGTACTCAGTCTTAGA** gaacccttataacctcttgagcgccctcccgcctgaacggaactggtacacagtattgga GCCAGTTCAAGACCTGAGAGAAATTAATAAAAGGGTACAGGATATTCATCCCACAGTCCC accagtacaggacttgagagaggtcaataaaagggtgcaggacatacaccccaacggtccc TCGGTCGCCCTGGAATACCCCCTCTGCTACCTGTAAAAAAGCCAGGGACCAATGACTATCG ccaatccccttggaatactcccctgctaccggttaggaagcctgggaccaatgattatcg TCGGGAAGGTATCAGACCCCACATCCAGAAGTTCCTAGACCTAGGGGGTCTTGGTGCCCTG tcgagaaggaatttggccgcatgttcaaagattaatccaacagggcatcctagttcctgt AGAGCTAAGATCAGGTGCCTCACCAGTGGCTGTTCGACAATATCCAATGAGCAAAGAAGC 3431 3423 2591 3843 3543 3243 3003

20

D 04 D 04 D 04 D

В

5 d b d

1,400

7

4.5. ....

Ş B δÃ 밁 Ω<sub>Y</sub> В Qy B 20 В Qγ 밁 Qy 밁 Q B οy 밁 Ş 밁 Ωy 밁 Ş 밁 Qy В Qy B Q В Š 밁 δÃ ₽ QY В 4692 aggaactamacacctgcagcagttggtcagaacatccccttatcatgttctgaggctacc 4751 4972 --- GCTCACCCCTGACCGGGGAAAAGAATTCATTAAGCGGTTACATCAGTTAACTCACTT 4917 --- CTACAAAACCTCAAGAGCCAATCGAGCCCGCTCAAGAAAAGACCAGGCCGAGGGA--4264 GTGGATGACCAATGCCAGAATGACTCATTACCAGAGCCTGCTGTTAAATGAAAGGGTATC 4204 AAATGTGACTGTGATTGCTTCCCATAGCCTCGAAAGCATCGTGCGGCAACCCCCCGACCG 3672 acctgttgcctacctgtcaaagaagcttgatcctgtagccagtggttggcccgtatgtct 3731 gatggctgaccgggttgccaagcaggcagcccaggctgttaaccttctgcctataataga agotattatacactgtoctggacatcagaaagccaaagatctcatatctagagggaacca 4451 aataaagaacaaagaggaaattctaagcctattagaagccttacatttgccaaaaaggct gcggctggccgaagggaaatccataaacatttatacggacagcaggtatgcctttgcgac 4271 atggatgaccaacgcccgcatgacccactatcaaagcctgcttctcacagagagggtcac 3911 gaatataactgtaatagccccccatgcattggagaacatcgttcggcagcccccagaccg gaaggetategeagetgtggeeataetggteaaggaegetgaeaaattgaetttgggaea AGATGAGAGAGCCGGCGTGGCCCGGGGAGTGCTCAGACTTTAGGACCCTGGCGCGC aatcctgccccacaaagaagggttagaatatgtccaacagatacatcgtctaacccacct aaagatagaccagttctctgagactccggaggggacctgctatacctcatatgggaagga 4633 CGCCATTATCCACTGTCCTGGCCACCAGAGGGGAAGTAACCCTGTGGCCACTGGGAACCG TGCTCATATTCATGGGGCAATATATAAGCAGAGGGGGCTGCTCACTTCTGCTGGAAAAGA ACGCCTGGCCGAAGGAAAAAAACATCAACATCTACACGGACAGCAGGTATGCTTTTGCCAC CAGCCTGCCAGAAGGTACGTCAGCCCAGAAGGCTGAACTAGTAGCCTTGACGCAGGCATT 4620 cagcctgccggaaggaacttcagcgcaaaaggctgagctcatggccctcacgcaagcttt 4211 GGAAGGTAAACGGAGAGCAGGGGCCCCGATCGTAGATGGCAAGCGGACGGTATGGGCTAG ggaaggtaagaggatggctgggggggggagtggacgggaccggaccgcacgatctgggccag 4151 agacataccgctgactggagaagtgctaacctggttcactgacggaagcagctatgtggt 4091 GTTTGCGCCCCCTGCTGTCCTAAACCCAGCTACCCTACTTCCAGTCGAGTCGGAAGCCAC tttcgctccaccagccgctctcaaccctgccactcttctgcctgaagagactgatgaacc 3971 GAAAGCGGTTGCAGCAGTAGCACTCCTTCTCAAAGACGCTGATAAGTTAACCTTGGGACA 4203 GCCAGTAGCATATCTATCAAAAAAACTGGATCCGGTGGCCAGCGGGTGGCCAACCTGCCT aacgcccaaagccccagaacccagacgacagtacaccctagaagactggcaagagataaa GAGGGCCGACGAGGCTGCAAAGCAAGCCGCCCTGTCGACCAGAGTGCTGGCAGGAA----AGACCAACCATTGCCCGG---GGTGCCAACCTGGTATACAGACGGTAGCAGTTTCATCAC 4500 CCCAGTGCACAGGTGCTCAGAAATCCTCGCCGAAGAAACTGGAACTCGACGAGACCTAGA agtgactcatgattgccatcaactattgattgaggagactggggtccgcaaggaccttac 4031 4391 4263 5028 4916 4860 4800 4560 4083

Ö ā

) (

		Ö	¥	ŏ \$	£ 8	δ P	გ გ	Ϋ́O	50	Дb	5 5	Z 5	<b>B</b>	Qy I	п <b>с</b>	_	_			)								
		6049	7	598		58	55	5. 0		<b>ن</b> تا			•		B 5	Ъ	Qy	P 4	g	Qγ	당	0 5	P 02	윩	ρ	В	Ş Ş	<u> </u>
				946 gtgg	_	969 GTG	32	5/49 CC 5472 ct1		689	352	292	569	232	5172 a	5449 :	112	5389	329	4992	20 1	6025	4872	5149	4812	5089	4752	_
SACG1	Lagacotttatcccttacctggctgattattgaccctgatacgggtgtcactgtaaa 	GTCTGCAAAATAAGAACCCCCACCAGCCCATGACCCTCACTTGGCAGGTACTGTCCCAAA	-aaca	9199a9a9cogaaaa9act9a9aatccccttaa9cttc9cctccatc9cct99ttcctt	TGCTGCCTGGGTCCATGCTTCTCACCTCAAACCTGCACCACCTTCGGCACCACGATGATTC	GTGGAAAGGCCCATACCTGGTGTTGCTGACTACCCCGACCGCGTAAAAAGTCGATGGTAT	GTTCCAGGTCGGGGATCAAGTGCTTGTCAGACGCCATCGACCCAGCAGCCTTGAGCCTCG	CAAATCTGGGACCAGATCAAAGAGGTGTATAAGCCTGGTACCGTAACAATCCCTCACCC ttccaagttggagattcagtctatgttagacgccaccgtaccatccaccc	cgagogtggaagcagctccgggaggcctactcaggaggagacttgcaaqttccaca+		THATGAAATTCTCTATGGAGGACCACCCCCATACTTGAGTCTGGAGAAACTTTGGGTCC	tatgaa	CCTCCTTCCCTTAGGGCTAGGGCTAGGGCCAGGAATACCCCTGGCCGGTTTGGTTTAGGGCTAGGGCCAGGAATACCCCTGGCCGGTTTGGTTTAGAGAGAG	ctcctc	aaccattaaagagacccttaccaaattgaccacagagactggcattaatgattggatggcaaaatggcacagagactggcattaatgattggatggcaaaatggcacagagactggcattaatgattggatggcaaaaggagacaggagagaga		ttggaa	caatgg	TAAAAAAATTATTAGAAGAAATTCTACCCCGCTTCGGGATCCCTAAGGTACTCGGGGTTACT	taaga	TACTITCTCCGGATGGGTAGAAACCTTTTTTCTTTTTTTTTT	AGACT	99act					
TGTCT	ttato	IIII ATAAGA	ataact	Cgaaa	GGTCC	CCCAI	TCGGG	'GGGAC  ttgga	.ggaag 	AGATTI	ATTCT(	ttgct	CCCTT	raaaga Jooott	taaaga	GITAC	actgo	tccag	AAATAT	aaatao	ICICC(	TCACA	tcact	ACAGA	igaata	GCAGTT	CCAGA.	
GGGAT,	cctta	Acccc	AGACTO	agact	ATGCT	ACCTG	SATCA/	CAGATO gatto	caget	CICCC	CTATG( Ctccca	ctacg	AGCGC	.tgtqc	gacco	ATTGT	attgt	CCTTC.	TAGAA	tggag	99atgc         3GATGC	GAAAT/	gaggt  }	GAGAC	leetee	100004 	AAAGC	
ACGTTGTCTGGGATACAAAGGCAGTCCAGCCCCCTTGGACTTGGTGCCCCCC	cctgg,		SATCAT	jagaat 	ICTCAC	GEGIT	GTGCT	CAAAG!	ccggg	TOTOT	AGGAC	3999ac	IGCTTA	TGACC.	ttacc	CGTAT	Jeatae	aatggtccagctttcgttgcccaggtaagtcagggactggccaagatattggggattga	GAAAT	gaaat	39taga         GTAGA	MAGCC	ggacttcactgaggtaaagccggctaaatacggaaacaaatatctattqqtttttqqaga		aggaa	ATCTGCAGTTCGCGAAGTCACCACTTAACTGATTTAACTGATTAAC	AGGACCAGAAAAGCTTCTCCAACTAGTGAACCGTACCAGCCTCCTCATCCCGAACCTCCA aggagt agct agct aggt common aggagg aggagg aggagg aggagg aggagg aggagg	
GCAGI	ctgatt 	GCCAS	CCICI	  :cccct	CTCAA	FIL	TGTCA	AGGTGT	aggeet	TATTI	CACCC	 	1111	AAATT!	aaatt	AGACC	CAGGT	caggt	TCTAC	לנננט	agent 1111 199ctt	regre	eggeta	AAAGG		CCACAL  -	AACTA	
CCAGO	attga	HI I	TAAGC	taagc:	ACCTG	TACCC	i I I i i GACGCC	ATAAG	actca	CTCAC	CCCATA	ccgtt	AGGAA	GCCTT	Jaccac	CAGAC	AAGTC,	aagtc	CCGCT	riccik	atcct	GGTAT	aatac	AACGA	TAG I G	cattgi	GTGAA	
CCCCTT	ccctg	TCACT	GCGTA	ttegee	cgccac           CACCAC	CGACC	ATCGA	CCTGGT	ggagga	rctcaa 	CTTGA	Jgcaga	PACCCC	AGAGA	agaga	Jeteag 	AGGGAC	aggga	TCGGG	ttaga	actaag	3GAAAC	ggaaa	ggaag      GGAGA	CAGGC	gtgcc	CCTAC	
rggact	atacgo	agaca       TGGCA	TTCGG	tccat	CTTCG	gctgt,       GCGGT/	CCCAG	ACCGT	agactt	III III agede	GTCTG	laattg	rtggac           reecc	CCGGTC	ctggc	gacag	Teecc	etgged	ATCCC1	ACTGA	aaaga 	AAGTA	aaata	CCACCO 	TTGTG	ctgcc	CAGCC	
1010 	gtgtc	gctcga       GTACI	ceece	cgcct	GCACC	gaaagt       \AAAGT	CAGCCT	AACAA	(AGAAA (Gcaaq	tcgagt	GAGAA	ccttt	agttt       GGTTT	GAAAA	eTAGA/	gtaga	ACTCA	aagat	Laaggt         AAGGT	AACGGC	gactto	TCTGT	tctat	caggeg	CCATGA	agctgg	TCCTC	
}-	actgta	GTCCC	CGGGA	ggttcc	cgacto    AGATGA	CGATG	CCGAGA        TGAGC	TCCCTC	TTGTA	.999tg	CTTTG	Jcacat	999cts	GACTG	AGAAT	Jaggat	ACTGGG	attgg	ACTCG	CCTAA	caaccg	FAGTAT	tggttt	ctcac	CTAAT	)ttaat	ATCCCG	
	G ,	<b>б</b>		ω <i>(</i>	ق ر	•	-	II I	AGGAC	aggca 	FIT	aqtqc	Jacccc 	l li GGTGAC	'GAACAG gatggc	igaata 	GATAA	ggattg	ggtca 	rcerc	rtggtg 	TCATA	reeGAC	tggga:	GCGGT	gctaato	AACCT	
	N (	763 108	048	705	o on	5591 5928	5531 5868	5808		5411	568	5351	529	556	G 5508 C 5231	.g 5171	544	ж эзвв ja 5111		53	49	52	5 2	9t 4	AC 5	tcc 48	σ	
																_	œ	μ ά	o <u>r</u> i	28	91	89	08	71	148	311	880	

ф Qy

D 04

Д Ş В

0y 0y 0y 0y 0b	04 04 04 04 04 04 04 04 04 04 04 04 04 0	
6707 6355 6767 6415 6415 6427 6475 6887 6535 6947 ( 6595 ( 7007 ( 6655 t 7004 ( 7064 ( 7124 ( 6715 a 6775 g(	66 63 63 63 63 63 63 63 63 63 63 63 63 6	Y O Y D Y D Y
31 31 CC CC C C C C C C C C C C C C C C	771 771 772 773 774	5821 6169 5881 5881 6229 6229 5941 5941 5941 5347 031
5 cctggagccacc 5 cctggagccacc 7 TCTCCCACCTCC 5 acagccgcctag 7 CACAGCCCTCCC 6 agftfttcctft		tagcactcg
	GGGGCTAGAATCC ttctcctttgtca; ltctcctttgtca; lcaraTCTAAATCC; syctyctccccatc rCAAAAATTTCAAA rCAAAAATTCAAA rCAAAAAATTCAAA llll gggggagcagggt gggggagcagggt grgggagcagggt grgggagcagggt llll grgggaacggaca	tagcactcgac             TTAAACCTGAT attgattaacc             ATGTCTCGTCC ttgctgcccag         3CAAATCACCTG Jagatggagctg
7 TGTGGCÄGTAGGTCTGACC 5 CCTGGAGCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	_8 6 4 A-4 2 2 8 b 0	- 6-3 33 4 6 6-33
TGTGGCÄGTAGGTCCTGACCTTCGCCCAGGTCCTGCCCCCAGGTAGGT	AC TO	gttgctco
Trecretting in its control in its co	CTATACTGTAAAGAATGG attccggccgggcaagt	tcgaggtgttgctcctagaggca
ACCTCGTCCTTGTGGAACAAGGACCTCCTAGAACGTCCC acttgccggtgccccaattaacctcgctgcggcctgaca cttgccggtgccccaattacctcgctgcggcctgaca cttgccgatgaacgccAccGCCATCTCTCCCGACTCTA cCCAAGGGAAGCGCCACCGCCATCTCTCCCGACTCTA taccactggattgattcctaccaacacgcctagaaact TGCACAAACTCCCACGGTGAGAAAACAATTGTTACCC aggacagagactcttcagtctacaccagggagctttcca tgatgccacttcttctgttgctatccctagg cgatgccactactctctgttggctttgtctatcctcagg cgatgccaCACACTTTTGATCTTGTGTAGGGGGCCTTCCT cgatgccaCACACACTTTTGATCTTGTGTTTTGCCCATCGG aggacagagaaaattcatgtggctttgctatcctagg cgatgcaCACACTTTTGATCTTGTGTTTTGCCCATCGG aggacagagaaaaattcatgtggcataggcatag cgatgcaCACTGAGTCTTGCTGGCCTTTGTTTGCCCATCGGC cactaagaagaaaaaattcaatgtgaccaacagagcatag cgctaaagaagaaaattcaatgtgaccaacaggcatag cgctaaagaagaagaaaatcaatgtacctgaggacacaccaacca	AATGGGA  AATGGGA  AACTGT TAACTGT TAACTGT TCCGGCTGG  CCGGCTGG  CCGGCTGG  CCGGCTGG  CCGGCTGG  CCGGCTGG  CCGGCTGG  CCGGCTGG  CCGGTTG  CCGGCTGG  CCGGTTG  CCGGTT  CCGGTTG  CCGGTT  CCGGT  CCGGTT  CCGGTT	toctagaggcacctggtgg,                   CCTTGGCGGCTAGTCTTGAK taaragcaccacctcccaacc                     CGAGTCAGACCTCCGGACT                     CGAGTCAGACCTCCGGACT                 ACGAGTGAGCTAGCCTC   C               ATAGGGTGAGCTGAGCCTC   CCCGGATGGACCCCC   CCCGGATGGACCCCCCCCCCCCCCCCCCCCCCCCCCCCC
	ATGGGATTGTGAGACCAC ATGGGATTGTGAGACCAC  aagtaCaaaatgatgatgaaa	acctggtggcctgaact
CCAAGGACCTCCTAGAACGTCCCTAGAACGTCCCTAGAACGTCCTAGAACGTCCTAGAACGTCCTAGAACGTCCTAGAACGTCCCTAGAACGTCCCTAGAACGTCCCTAGAACGTCCCTAGAACGACCTCTAGAACAACGTCCTAGAACAACGAACG	TGTGAGAC  aaatgatg	rtggtggcctgaactgcatttctgc
CCCTAG. Ctgcgu Ctgcgu Ctgcgu Ctgcgu CcAATT CAATT CTCAG	ACCACGGGGACCGGTT Itgaaactatataagat Itgaaactatataaagat IGACCAAAATAGCGAATG ICACCTGAAAATAGATTT ICCCCTTAAAATAGATTT ICCCCTTAAAATAGATTT ICCCCTTAAAATAGATTT ICCCCTTAAAATAGATTT ACCTGGGGATTAAGATTT ACCTGGGGATTAAGATT IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	gaactg TTGGGA TTGGGA T   
CTAGAACGTCCTAACGTCCCTAACGTCCCTAACGTCCGACTCTAACGTCCTAACGTCTAACGTCTAACGTCTAACGTCTAACGTCTAACGTCTAACGTCTAACGTCTAACGTCTAACGTCTAACGTCTAACGTCTAACGTCTAACGTCAACGTCTAACGTCAACGTCTAACGTCAACGTCTAACGTCAACGTCTAACGTCAACGTCTAACGTCTAACGTCAACGTTTAACCGTATCAACGTTTAACCGTTTAACCCTATCAACGTTTAACCCTATCAACGTTTAACCCTATCAACGTTTAACCCTATCAACGTTTAACCCTATCAACGTTTAACCCTATCAACGTTTAACCCTATCAACGGTTTAACCCTATCAACGGTTTAACGTTAACGGTTTAACGTTAACGGTTTAACGTTAACGGTTTAACGGTTAACGGTTTAAACGGTTAACGGTTTAAACGGTTTAAACGGGTTAACGAACG	GGGGACC Ctatata     NAATAGC AAATAGC Jaaaggan	gcattci
ACC Galage Con Acc Con	TGTAAAGAATGGGATTGTGAGACCACGGGGACCGGTTATT  SCC999Caagtacaaatgatgatgaaactatataaagataa;	
641 682 647 688 689 6534 6594 6659 77006 6654 77006 7707 7774 1183	TTG 6 11ag 6: 1   1   1   1   1   1   1   1   1   1	, a , a , a , a , a , a , a , a , a , a
	46 46 86 86 86 86 86 86 86 86 86 86 86 86 86	5880 6228 5940 6286 6286 6000 6346 6030 5406

Ş 밁 õ 밁 Q 멍 Ş 밁 ρ Ş δÃ 밁 밁 밁 В 밁 Qy ğ 밁 В Qy 밁 Ş 밁 US-08-110-300A-8 Sequence 8, Application US/08110300A Patent No. 5643756 GENERAL INFORMATION: 7964 CGAAGGTAACCTTTAATTTT----7555 ccaaggagaaactgacctctagccttcccagttctaagattagaactattaacaagacaa 7614 7315 aaaaaagttagagaggcgtcgaagggaaagagaggctgaccaggggtggtttgaaggatg 7374 6835 tgggttaaccccctgtgtttccacctcagtcttcaaccaatccaaagatttctgtgtcat 6894 8014 ATGGGGG 8020 7615 gaagtgg 7621 7904 TGATAGGATAAGTGCATGTTAAAATTCTGGTCCTTAGACAAAATATCAGGCCCTAGAGAA 7963 7495 agaacgagtgagtgcagtccagatcatggtacttaggcaacagtaccaaggccttctgag 7554 7664 AGAGTGCTGTTTTTACATAGACCACTCAGGTGCAGTACGGGACTCCATGAAAAAACTCAA 7723 7195 ccggaggggattagatctgctgtttctaagagaaggtgggttatgtgcagccttaaaaga 7254 7364 CAATICTCACCCCAGGACTAAAAGAGAGGCTGTCTCACTTACCCTAGCTGTTTTACTGGG 7423 6955 ctatcggtataaccgaccaaaaagagaacccgtatcccttaccctagctgtaatgctcgg 7014 6895 ggtccaaatcgtcccccgagtgtactaccatcctgaggaagtggtccttgatgaatatga 6954 7244 TGGCCTCACCCCTTGCCTCTCCACCTCAGTTTTTAATCAGACTAGAGATTTCTGTATCCA 7303 7604 TAGGAGAGGCCTTGACTTGCTGTTTCTAAAAGAAGGTGGCCTCTGTGCGGCCCCTAAAGGA 7663 7544 AGACTCAGTCAGCAAGTTAGAGGACTCACTGACTTCCCTGTCCGAGGTAGTGCTCCAAAA 7603 7135 ggagtctgttagcaacctagaagagtccctgacttctttgtctgaagtggttctacagaa 7194 7484 CCTCCAGCAAGGCCTGACAAGCCTCCAGATCGCCATAGATGCTGACCTCCGGGCCCCTCCA 7543 7015 attagggacggccgttggcgtaggaacaggaccacggctgccctgatcacaggaccacagca 7074 GTTCAATAACTCCCCTTGGTTCACTACCCTGCTATCAACCATCGCTGGGCCCCCTATTACT 7843 gttcaacaggtctccttggatgaccaccctgctttctgctctgacggggcccctagtagt 7434 AGAAAAACTGGATAAAAGACAGTTAGAGCGCCAGAAAAGCCAAAACTGGTATGAAGGATG 7783 agaatgttgcttctatgtagatcactcaggagccatcagagactcccatgaaccaagcttag 7314 GGTCCAGCTGATTCCTCGCATCTATTACTATCCTGAAGAAGTTTTGTTACAGGCCTATGA 7363 gctagagaaaggacttggtgagctacatgcggccatgacagaagatctccgagccttaaa 7134 ---GCTCTAAGATTAGAGCTATTCACAAGAGAA 8013

APPLICANT: Pinter, Abraham APPLICANT: Kayman, Samuel TITLE OF INVENTION: FUSION GLYCOPROTEINS NUMBER OF SEQUENCES: 25 NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS: COUNTRY: STREET: 45 Rockefeller Pl. ADDRESSEE: New York 10111 New York USA Davis Hoxie Faithfull and Hapgood

Qy

1034 cagcacagggtgctgtgaggggacctctgcccctcctggagctccggtggtggagggacc 1093

В 9 В Ş δÃ B Qy 밁 Ω 9 B Š 밁 밁 Qy 밁 밁 Ş 뭥 US-08-110-300A-8 Query Match Best Local Similarity Matches 4053; TELEFAX: 212-586-1461 INFORMATION FOR SEQ ID NO: 8: 1036 ACCAAACCTAGGCCTCAAGTCCTTCCTGATAGCGGAGGACCACTCATTGATCTACTCACG 1095 MOLECULE TYPE: SEQUENCE CHARACTERISTICS: CLASSIFICATION: 435 ATTORNEY/AGENT INFORMATION: COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIA RE-BASE #1.0, Version #1.25
CURRENT APPLICATION DATA: COMPUTER READABLE FORM: MEDIUM TYPE: Floppy ANTI-SENSE: TELECOMMUNICATION INFORMATION: HYPOTHETICAL: 976 CCCCCACTCTCGACCCCGCCCCAGTCCTCCCTCTATCCGGCTCTCACTTCTCCTTTAAAC 1035 693 gcctctgaatggccaaccattcgatgttggatggccatcagaggggacctttaattctgaa 752 513 ctggatctgtttggtttctgtctcgtgtgtctttgtcttgtgcgtccttgtctacagtttt 572 455 teegeggeegteegaetettttgeetgettgtggaa--gaegeggaegggtegegtgtgt 512 974 ccgagatcgaggagccgccgacttggccggaaccccaacctgttcccccacccccttatc 1033 914 tottggagagaaaacaaacactoggoogaaaaagtogagoootottootogtatotaco 973 873 tggctaaa---------taaaccaagaaagccaggtccccgaatcctggc 913 813 gagccctatatccttacgtggcaagatttggcagaagatcctccgccatgggttaaacca 676 GAACGGACAGCCCACAACCTGTCGGTAGAGGTTAGAAAAAGGCGCTGGGTTACATTCTGC 616 AACATGGGCCAGGCTGTTACCACCCCCTTAAGTTTGACTTTAGACCACTGGAAGGATGTC 675 573 aatatgggacagacagtgactaccccccttagtttgactctcgaccattggactgaagtt 558 CTGCTGCAGCATCGTTCTGTGTTGTCTCTGTTTGACTGTT--TTTCTGTATTTGTCTGAA 615 796 ATTATTACACAGGTTAAGATCAAGGTCTTCTCACCTGGCCCACATGGACATCCGGATCAG 753 attatectggetgttaaggeaateattttteagaetggaeeeggeteteateetgateag 736 TCTGCAGAATGGCCAACCTTCAACGTCGGATGGCCACGAGACGGCACTTTTAACCCAGAC 633 agatecagggeteataatttgteagtteaggttaagaagggaeettggeagaetttetgt 692 TELEPHONE: 214 - TELEPHONE: 212-586-1461 APPLICATION NUMBER: US/0 FILING DATE: 20-AUG-1993 TOPOLOGY: STRANDEDNESS: TYPE: REFERENCE/DOCKET NUMBER: 32 LENGTH: nucleic acid Jacobs, 8323 base pairs Conservative linear N O Floppy disk double DNA (genomic) Seth H. 21.2%; US/08/110,300A 32,140 1; Mismatches 3007; Indels 240; Gaps 11698A50 Score 1739.4; DB 1; Pred. No. 0; Length 8323;

557

27;

```
Score_list:

Strd Orig 2500re LEG | Documentation | Documentation | Documentation | Sequence | Sequ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM of: US-09-171-553-5 to: Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Date: Sep 1, 2000 9:19 AM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           About: Results were produced by the GenCore software, version 4.5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -MODEL-frame+_p2n.model -DEV-xlp
-Q-/cgn2_1/USPTO_spool/US09171553/runat_15082000_113459_22964/app_query.fasta_1.2582
-Q-/cgn2_1/USPTO_spool/US09171553/runat_15082000_113459_22964/app_query.fasta_1.2582
-DB-Issued_Patents_NA -OFMT-fastap -SUFFIX-rin -GAPOD-12.000
-GAPEXT-4.000 -MINMATCH-0.100 -LOODEL-0.000 -LOODEXT-0.500
-QGAPEXT-4.000 -MINMATCH-0.500 -YGAPEXT-0.500
-GGAPEXT-0.000 -YGAPEXT-7.000 -YGAPOD-10.000 -YGAPEXT-0.500
-FGAPEXT-7.000 -YGAPOD-10.000 -YGAPEXT-0.500
-FGAPOD-6.000 -DELEXT-7.000 -YGAPOD-10.000 -YGAPEXT-0.500
-FGAPOD-6.000 -FGAPEXT-7.000 -YGAPOD-10.000 -YGAPEXT-0.500
-FGAPOD-13 -ALIGN-15 -MODE-LOCAL -OUTFMT-Pfs
-NCPM-ext -MINLEN-0 -MAXLEN-1000000 -USER-US09171553_eCGN1_1_98
-NCPM-ext -MINLEN-0 -MAXLEN-1000000 -USER-US09171553_eCGN1_1_98
-NCPM-ext -MINLEN-0 -MAXLEN-1000000 -USER-US09171553_eCGN1_1_98
-NCPM-ext -MINLEN-0 -MAXLEN-1000000 -USER-US09171553_eCGN1_1_98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Search time (sec): 94.350000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database sequences: 243080 Database length: 68777915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Search information block:
ry: US-09-171-553-5
/cgn2_6/ptodata/2/ina/6_COMB.seq:US-08-488-551B-800 +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ry: Us-v. - 1194
ry length: 1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 copyright (c)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1993-2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 out_format : pfs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         949
                                                                                                                                                                                                                                                                              ! Pat
                                                                                                                                                                                                                                                                                                                                                                                                      1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3168
```

```
/cgn2_6/ptodata/2/ina/5A_COMB.seq:US-08-082-835-1 + 511.50 864.34 1.2e-40 /cgn2_6/ptodata/2/ina/5A_COMB.seq:US-08-388-809-1 + 511.50 864.34 1.2e-40 /cgn2_6/ptodata/2/ina/5A_COMB.seq:US-08-647-714-1 + 511.50 864.34 1.2e-40 /cgn2_6/ptodata/2/ina/5C_COMB.seq:US-08-647-714-1 + 511.50 864.34 1.2e-40 /cgn2_6/ptodata/2/ina/5D_COMB.seq:US-08-876-546A-15 + 510.00 879.60 1.7e-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seq_name: /cgn2_6/ptodata/2/ina/6_COMB.seq:US-08-716-351A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seq_documentation_block:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1, Application US/08716351A patent No. 6033905
                                                                                                                                                                                                                                                                                                        alignment_block:
US-09-171-553-5 x US-08-716-351A-1
                                                                                                                                                                                                                                                                                                                                                                                                                    alignment_scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-716-351A-1
                                                                                                                                                                                                                                                                                                                                                    Ratio: 4.238
Percent Similarity: 85.992
                                                                                                                                                                                                                                                                   Align seg 1/1 to: US-08-716-351A-1 from: 1 to: 8535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (415) 543-5043
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                            FILING DATE: 06-APR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Bastian, Kevin L.
REGISTRATION NUMBER: 34,774
REFERENCE/DOCKET NUMBER: 15280-128-1PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: PCT/US94/03784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/716,351A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE:
                                                                                                                                                      17 1GluGlyGlnProValGluPheLeuValAspThrGlyAlaGluHisSerV 34
                                                                                34 alLeuLeuGlnProLeuGlyLysLeuLysGluLysLysSerTrpValMet 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
         51 GlyAlaThrGlyGlnArgGlnTyrProTrpThrThrArgArgThrValAs 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: 1..8535
OTHER INFORMATION: /standard_name= "Galv SEATO Genome"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc_feature LOCATION: 1..8535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                    Quality: 4319.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8535 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (415) 543-9600
(415) 543-5043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gibbon Ape Leukemia Virus-Based Retroviral Vectors
                                                                                                                                                                                                                                                                                                                                                                     percent Identity: 68.523
Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        879.60 1.7e-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9739
9739
9739
```

j

2764 AATTGGACATAAACAAGTGACCCACTCCTTCCTGGTCATACCCGAGTGCC 2813

67 preuglyValGlyArgValThrHisSerPheLeuValIleProGluCysP 84

2714 GGAGCGACAGGCAAGGTCTACCCCTGGACCACAAAAAGACTTTTAAA 2763

617 UIIeGlUGLUTHTGLYVALATGLYSASPLEU 617 UIIeGLUGLUTHTGLYVALATGLYSASPLEU 7	4 1 3 2 3 6 7 1	1 GlyPheSerTrpAlaProGluHisGlnLysAlaPheAspAlai	384 371 400 400 376 417 381 381 381 434 434 381 381

```
2864 CAGITITICCGCTGAGGGCCCACAGGTAACATGGGGAGAACGCCCTACTAT 2913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101 SerpheGluGlnGlyArgProGluValSerValAsnAsnLysProIleTh 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           134 alLysProAspGlnAspIleGlnSerTrpLeuGluGlnPheProGlnAla 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    117 rValLeuThrLeuGlnLeuAspAspGluTyrArgLeuTyrSerProGlnV 134
                                                                                                                                                                                                                                                                                                                                                                                                                            3111 TGAGCAAAGAGCTCGGGAAGGTATCAGACCCACAATCCAGAAGTTCCTA 3160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 167 lileGlnLeuLysAlaSerAlaThrProValSerValArgGlnTyrProL 184
                                                                                                                                                                                                                                                                                                                               3261 GAGAAATTAATAAAAGGGTACAGGATATTCATCCCCACAGTCCCAAACCCT 3310
                                                                                                                                                                                                                                                                                                                                                                             184 euserArgGluAlaArgGluGlyIleTrpProHisValGlnArgLeuIle 200
                                                                                                                                                                                                                               3311 TACAATCTTCTGAGTTCCCCTTCCCCCTAGCTATACTTGGTACTCAGTCTT 3360
                                                                                                                                                                                    3511 CGACGAGGCCCTCCACCGAGATTTGGCTCCCTTTAGGGCCCTCAACCCCC 3560
                                                                                                                                                                                                                                                                                              251 TyrAsnLeuLeuSerAlaLeuProProGluArgAsnTrpTyrThrValLe 267
                                                                                                                                                                                                                                                                                                                                                      234 rgGluValAsnLysArgValGlnAspIleHisProThrValProAsnPro 250
                                                                                                                                                                                                                                                          267 uAspLeuLysAspAlaPhePheCysLeuArgLeuHisProThrSerGlnP 284
                                                                                                                                                                                                           284 roLeuPheAlaPheGluTrpArgAspProGlyThrGlyArgThrGlyGln 300
                                                                                                     317 eAspGluAlaLeuHisArgAspLeuAlaAsnPheArgIleGlnHisProG 334
                                                      334 InValThrLeuLeuGlnTyrValAspAspLeuLeuLeuAlaGlyAlaThr 350
                                         AGGTGGTGTTACTCCAATATGTGGACGACCTCTTGGTGGCCGCCCCCACA 3610
                   GlnAspCysLeuGluGlyThrLysAlaLeuLeuLeuGluLeuSerAs 367
IGCARAAAAGGAACACAGAAGCTCTTACAGGAGTTAAGTAA 3660
```

から出土され

983	snGlyProAlaPheValAlaGlnValSerGlnGlyLeuAla	966
966 5382	LysIleLeuGluGluIlePheProArgPheGlyIleProLysVallleGl 9	950 5333
949 5332	rpValGluAlaTyrProThrLysLysGluThrSerThrValValAlaLys (	933 5283
933 5282	aLysTyrGlyAsnLysTyrLeuLeuValPheValAspThrPheSerGlyT ( ::::	916 5233
916 5232	SerHisProGlyAlaHisTrpGluValAspPheThrGluValLysProAl ( ::::::      :::::       :: GATCGACCCGGCGTGTACTGGGAGGTAGACTTCACAGAAATAAAGCCTGG (	900 5183
899 5182	euValAsnAlaAsnProSerArgIleProProGlyLysArgLeuArgGly ( ::::       rgACTAATGCGGTCACCACCTACAGAGAGACCGGAAAAAAGGCAACGAGGA (	883 5133
883 5132	lProCysGlnL     : GGCTTGTGCCA	866 5083
866 5082	SLEUGINGINLEUVAlArgThrSerProTyrHisValLeuAr 	850 5033
849 5032	IleHisargLeuThrHisLeuGly :::   :::             TTACATCAGTTAACTCACTTAGGA	833 4986
833 4985	rCysTyrThrSerTyrGlyLysGluIleLeuProHisL::   ::    ::    ::    ::    ::   - ::   :   ::   ::   ::   ::   ::   ::   ::   ::   ::   ::   ::   ::   :   ::	816 4967
4966		4958
816	hrLeuGluAspTrpGlnGluIleLysLysIleAspGlnPheSerGluTh	800
799 4957	euProIleIleGluThrProLysAlaProGluProArgArgGlnTyr 	784 4908
784 4907	nGlnMetAlaAspArgValAlaLysGlnAlaAlaGlnAlaValAsnLeuL 	767 4858
767 4857	IleHisCysProGlyHisGlnLysAlaLysAspLeuIleSerArgGlyAs 	751 4808
750 4807	lulleLeuSerLeuLeuGluAlaLeuHisLeuProLysArgLeuAlaIle         :::           :::	734 4758
734 4757	sGlnArgGlyLeuL                GCAGAGGGGGCTGC	717 4708
717 4707	AspSerArgTyrAlaPheAlaThrAlaHisValHisGlyAlaIleTyrLy	701 4658
700 4657	euThrGlnAlaLeuArgLeuAlaGluGlyLysSerIleAsnIleTyrThr 	684 4608
4607	7 aSerSerLeuProGluGlyThrSerAlaGlnLySAlaGluLeuMetAlaL 	4558

```
seq_documentation_block:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq_name: /cgn2_6/ptodata/2/ina/5B_COMB.seq:US-08-258-420-13
                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 13, Application US/08258420 Patent No. 5710037
                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Nienhuis, Arthur W.
APPLICANT: Vanin, Elio F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6033 GGCGG 6037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1181 isArg 1182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5933 GCCTGGGTCCATGCTTCTCACCTCAAACCTGCACCACCTTCGGCACCAGA 5982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1150 ThrTrpIleHisAlaSerHisValLysProAlaProPro.....ProAs 1164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1133 yrLeuValLeuLeuThrThrProThrAlaValLysValGluGlyIlePro 1149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5983 TGAGTCCTGGGAGCTGGAAAAGACTGATCATCCTCTTAAGCTGCGTATTC 6032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1164 pSerGlyTrpArgAlaGluLysThrGluAsnProLeuLysLeuArgLeuH 1181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5883 ACCTGGTGTTGCTGACTACCCCGACCGCGGTAAAAGTCGATGGTATTGCT 5932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5833 TGTCAGACGCCATCGACCCAGCAGCCTTGAGCCTCGGTGGAAAGGCCCCAT 5882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5783 CCTGGTACCGTAACAATCCCTCACCGGTTCCAGGTCGGGGATCAAGTGCT 5832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1100 GlyGlyAspLeuGlnValProHisArgPheGlnValGlyAspSerValTy 1116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5733 TAGAAATTGTAAGGACCCAAATCTGGGACCAGATCAAAGAGGTGTATAAG 5782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1083 euGluTrpValArgGlnArgAlaTrpLysGlnLeuArgGluAlaTyrSer 1099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5683 GGGTCCCGATGATAGATTTCTCCCCTGTCTTATTTACTCACTTAAAGGCTT 5732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1050 GluLeuLeuTyrGlyGlyProProProLeuAlaGluIleAlaPheAlaHi 1066
                                                                                                                                                                                                     TITLE OF INVENTION: NO. 5710037el Retroviral Envelope and LTR and Retroviral VeNUMBER OF SEQUENCES: 14 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1116 rValArgArgHisArgAlaGlyAsnLeuGluThrArgTrpLysGlyProT 1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1066 sSerAlaAspValLeuLeuSerGlnProLeuPheSerArgLeuLysAlaL 1083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5633 GANATTCTCTATGGAGGACCACCCCCCATACTTGAGTCTGGAGAAACTTT 5682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5583 CGCTGCTTAGGGCCAGGAATACCCCTGGCCGGTTTGGTTTAACTCCTTAT 5632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1033 alLeuPheArgValArgAsnThrProGlyGlnPheGlyLeuThrProTyr 1049 ::|||:::|||:::|||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5533 ATTAGCCTTAGAGACCGGTGGAAAAGACTGGGTGACCCTCCTTCCCTTAG 5582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1016 SLeuThrThrGluThrGlyIleAsnAspTrpMetAlaLeuLeuProPheV 1033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5483 TCAGGTCAGGTAGAAAGAATGAACAGAACAATTAAAGAGACCTTGACCAA 5532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5433 CTCAACTGGGGATAAATTGGAAGTTACATTGTGCGTATAGACCCCAGAGC 5482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5383 GTCAGACAATGGCCCGGCCTTTGTTGCTCAGGTAAGTCAGGGACTGGCCA 5432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1000 SerGlyGlnValGluArgMetAsnArgThrIleLysGluThrLeuThrLy 1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         983 ysIleLeuGlyIleAspTrpLysLeuHisCysAlaTyrArgProGlnSer 999
                                                         CITY: Roseland
STATE: New_Jersey
                                                                                                                                 ADDRESSEE: Carella, Byrne, Bain, Gilfillan, Cecchi, Stewart & Olstein STREET: 6 Becker Farm Road
COUNTRY: U
                              USA
```

COMPUTER READABLE FORM:

OM of: US-09-171-553-4 to: Issued\_Patents\_NA:\* out\_format : pfs

4.5e-20 5.7e-15 6.5e-22

Date: Sep 1, 2000 9:18 AM

About: Results were produced by the GenCore software, Copyright (c) 1993-2000 Compugen Ltd.

Command line parameters: 

Search time (sec): 94.350000 Database sequences: 243080 patabase length: 68777915 Database: h information block: length: 524 US-09-171-553-4 Issued\_Patents\_NA:\*

alignment\_block:

Percent Similarity:

 $us^{-}09-171-553-4 \times us-08-716-351A-1$ 

Align seg 1/1 to: US-08-716-351A-1 from: 1 to: 8535

1001 ATGGGACAAGATAATTCTACCCCTATCTCCCTCACTCTAAATCACTGGAG 1050

1 MetGlyGlnThrValThrThrProLeuSerLeuThrLeuAspHisTrpTh 17

1051 AGATGTGAGAACAAGGGCTCACAATCTATCCGTGGAAATCAAAAAGGGAA 1100

17 rGluValArqSerArgAlaHisAsnLeuSerValGlnValLysLysGlyP 34

1101 AATGGCAGACTTTCTGTTCCTCCGAGTGGCCCACATTCGGCGTGGGGTGG 1150

51 ProSerGluGlyThrPheAsnSerGluIleIleLeuAlaValLysAlaIl 67

34 roTrpGlnThrPheCysAlaSerGluTrpProThrPheAspValGlyTrp 50

alignment\_scores:

Quality: 1660.50 Ratio: 3.944

3.944 77.675

Length: 542
Gaps: 10
Percent Identity: 61.439

```
/cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:PCT_US95-00453-5 + 379.50 527.90
/cgn2_6/ptodata/2/ina/5C_COMB.seq:US-08-385-335A-8 + 378.00 494.78 4.
/cgn2_6/ptodata/2/ina/5C_COMB.seq:US-08-691-563C-60 + 305.50 403.28 5.
/cgn2_6/ptodata/2/ina/5A_COMB.seq:US-08-181-335B-11 + 182.50 254.38 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seq_documentation_block:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seq_name: /cgn2_6/ptodata/2/ina/6_COMB.seq:US-08-716-351A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No.
US-08-716-351A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1, Application US/08716351A Patent No. 6033905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (415) 543-5043
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READAL MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 06-APR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
PRIOR APPLICATION NUMBER:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 8535 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Palacing Patentin Patentin Palacing Patentin Patentin Palacing Patentin Paten
                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                          HYPOTHETICAL:
                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/716,351A FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER: 34.
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                           OTHER INFORMATION: /standard_name= "GalV SEATO Genome"
                                                                                           NAME/KEY: misc_feature LOCATION: 1..8535
                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bastian,, Kevin
                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (415)
                                                                                                                                                                                                                                               NO
                                                                                                                                                                                                                                                                                               DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gibbon Ape Leukemia Virus-Based
Retroviral Vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCT/US94/03784
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              34,774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15280-128-1PC
```

1151	CCACCGGAGGGAACTTTTAATCTCTCTGTCATTTTTGCAGTTAAAAAAGAT	1200
67 1201	ellepheGlnThrGlyProGlySerHisProAspGlnGluProTyrlleL	84 1247
84 1248	euThrTrpGlnAspLeuAlaGluAspProProProTrpValLysProTrp::::::	100
101	ysProGlyProArgIleLeuAlaLeuGlyG	117
1289	CCAGCCTCCGCCAAGGTCGCTGTTGTCTCTGA	1323
117 1324	SASnLySHisSerAlaGluLysValGluProSerSerSerTyrLeuProA: ::::::	134 1367
134	aAlaAspLeuAlaGlyT  :::	146
1368	AACAGACGACTTACTCCTCCTCTCTGAACCCA	1417
147 1418	CysSerProThrProLeuSerSerThrGlyCysCy 1 :::           ::: ::: CCGCCCTATCCGGCGCACTGCCACCCCCTCTGGCCCCTCAGGCGATCGG 1	158 1467
158	sGluGlyThrSerAlaProProGlyAlaProValValGluGlyProAlaA 1	.75
175	aGlyThrArqSerArqArqGlyAlaThrProGluArqT	80
1518	GGG:	L567
189 1568	AspGluIleAlaIleLeuProLeuArgThrTyrGlyProProMetProGl 2	205
205 1618	yGlyGlnLeuGlnProLeuGlnTyrTrpProPheSerSerAlaAspLeuT 2 :::	222
n iö	oPheSerGluAspProGlnArgLeu	ıω
239	hrGlyLeuValGluSerLeuMetPheSerHisGlnProThrTrpAspA	55
1718	ACGGGCTCCTTGAGTCTCTTATGTTCTCCCATCAGCCCACTTGGGACGA	
255 1768	PCysGlnGlnLeuLeuGlnThrLeuPheThrThrGluGluArgGluArgI 2	817
272 1818	leLeuLeuGluAlaArgLysAsnValProGlyAlaAspGlyArgProThr 2 	88
289 1868	GInLeuGlnAsnGluIleAspMetGlyPheProLeuThrArgProGlyTr 3       :::       ::: :::       :::       3 	05 917
305 1918	PASPTYrASDThralaGluGlyArgGluSerLeuLySIleTyrArgGlnA 3                  GATTACAACACAGCCGCAGGTAGGGAGCGTCTTCTGGTCTACCGCCGGA 1	22 967
322 1968	laLeuValAlaGlyLeuArgGlyAlaSerArgArgProThrAsnLeuAla 3 ::	38 017
339	LysValArgGluValMetGlnGlyProAsnGluProProSerValPheLe 3 	55 067

ě	WARE: Patentin Release #1. WT APPLICATION DATA: JICATION NUMBER: US/08/850.	
	PERATING SYSTEM: PC-DOS/MS-	·· ·· ··
	94662-8097 TER READABLE FORM:	٠. ٠.
	TE: Emeryvii TE: Califor TRY: USA	
y - R440	RESSEE: Chiro	٠. ٠.
	OF INVENTION: CROSSLE R OF SEQUENCES: 45 SPONDENCE ADDRESS:	
	CANT: Driver, David A.	
	ICANT: Sauter,	
	ICANT: Respess ICANT: De Polo	
	entation_block: 1, Application US/088 No. 6013517 L INFORMATION:	n Lord
	ame: /cgn2_6/ptoda	Õ
	512 ysGlyProLysValLeuAlaLeuGlu 520 ::               ::: 2532 GAGAAGCCAAGGTTCTAGCCCTAGAT 2557	
512 N 2531	496 SLYSG1uLySG1yHiSTTPAlaArgAsnCySPToLySLySG1yAsnL	
24	32 ACACCTAGGGATGGAAGA	
496	485ArgThrProLeuAspLysAspGlnCysAlaTyrC	
. 484	472 leArgSerGlyProArgGlnSerGlyAsnLeuGlyAsn	
23		
47	alValGluGlyLysSerSerArgGluArgGluArgAspPh	
1 455	439 GluargargaspargargGlnGluLysasnLeuThrLysIleLeuAlaal ::::	
u 438     2317	422 hrGluGluGluLysGluGlnArgLysGluLysGluArgGluGluArgGlu	
T 422  -  A 2267	405 uLeuArgAspLeuValArgGluAlaGluLysValTyrTyrArgArgGluT :   :::               2118 CTTACAAGATTTAGTAAAAGAGGCAGAAAAGGTGTACCATAAGAGAGAG	
1 405 : C 2217	389 LeuAspIleArgLysLysLeuGlnArgLeuGluGlyLeuGlnGluAlaGl       :::	
a 388   C 2167	372 erGluAlaGInLysAlaSerValAlaLeuAlaPheIleGlyGlnSerAl.      :::   :::    :::      :::	
s 372     2117	355 uGluargLeumetGlualaPheArgArgPheThrProPheAspProThr 	•